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10/044,036	01/11/2002	Christopher Kikta	085197.085822	7935
24335 7590 02/05/2008 WARNER NORCROSS & JUDD LLP 900 FIFTH THIRD CENTER 111 LYON STREET, N.W. GRAND RAPIDS, MI 49503-2487			EXAMINER DIVECHA, KAMAL B	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/044,036

Applicant(s)

KIKTA ET AL.

Examiner

KAMAL B. DIVECHA

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 and 67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31, 67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Action is in response to communication filed 11/9/07.

Claims 1-31 and 67 are pending in this application.

Claims 32-66 were previously cancelled.

Claims 3, 5-6, 9-10, 14, 28 are cancelled in response filed 11/9/07.

Claim 67 is newly added.

### **Response to Arguments**

Applicant's arguments filed 11/9/07 have been fully considered but they are not persuasive.

In response filed, applicant argues in substance that:

- a. Section 112, first paragraph rejections (remarks, pg. 11-12).

In response filed, applicant submits:

#### Section 112, First Paragraph, Rejection of Specification

The specification was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, it is asserted that the Specification does not support the following claim limitations: (1) a "profile containing a plurality of pre-defined application controller type specific commands," and (2) a "self configuring means for configuring each of said plurality of application controller using at least one of said plurality of pre-defined application controller type specific commands of identified profiles," Office Action at Page 4. It is not clear to Applicants which portions of the cited claim language are allegedly unsupported. Accordingly, Applicants have provided support for each portion of the cited pending claim language.

Applicants note that in the previous Response the amended claim term "pre- defined" was intended to mean that the profiles were "preprogrammed," either on the control interface or on an application controller, as opposed to being developed during operation. A profile which resides on an application controller and is transmitted to the control interface is considered preprogrammed because, though it was transmitted during operation, it was not programmed during operation. In view of the objection, Applicants have amended the term "pre- defined" to "preprogrammed" for clarity.

Addressing the specific rejections, the Specification teaches that 1) the control unit "stores profiles for the various controller types recognized by the system" (Specification Pg. 39, Lines 8-10); 2) the "local control interface is preprogrammed with profiles for the various application controllers supported by the system" (Specification Pg. 5, Lines 22-23); and 3) each profile includes commands, such as input variables, output variables and input configuration variables.

Specifically, the Specification states that:

In a preferred embodiment, each profile includes a record for each variable supported by the application controller. The record includes a field for variable type, variable name, display name and variable number. The variables are preferably classified in one of three different types-namely, input variables, output variables and input configuration variables. Input variables represent variables that can be sent to the application controller by the local control interface. Output variables represent variables that can be sent by the application controller to the local control interface. And finally, input configuration variables are control variables that relate to

operation of the application controller, but that are not routinely varied through local control interface 12 commands or otherwise. Each application controller is preferably pre-loaded with default values for all control variables. This facilitates automated configuration, by eliminating the need to provide these control variables with initial values. Specification Pg. 39 Ln. 20 - Pg. 40 Ln. 7.

The amended claims, along with the specification support cited above overcome the rejection

None of this cited section of the specification discloses and/or suggests the usage of “pre-defined and/or pre-programmed application specific commands”. More specifically, there is simply no description of pre-programmed application specific commands in the profile.

A command and a variable, as is known in the art, are clearly distinct and/or different. In other words, a command is not equivalent to a variable.

“A command” is defined as an instruction to a computer program that, when issued by the user, causes an action to be carried out, See Microsoft Dictionary, pg. 111, submitted on form PTO-892, whereas “a variable”, in programming, is a named storage location capable of containing data that can be modified during program execution, MS Dictionary, pg. 547.

It seems from the description above that the applicant is interpreting the variables of the specification as commands in the claims. However, the specification as filed fails to define the terms commands to include variables as asserted by the applicant, see point 3, remarks, pg. 12

Furthermore, see MPEP 2111.01, on usage of plain meaning and Applicant’s use of own lexicographer.

In this case, applicant’s specification fails to define and/or convey to one of ordinary skilled in the art that the commands are defined to include variables.

As such, the rejection is maintained for the reasons set forth above.

- b. Section 112, second paragraph rejection (remarks, pg. 12-13).

In response filed, applicant submits:

Section 112, Second Paragraph, Rejection of Claims

The claims were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, it is asserted that the Applicants did not provide an intended meaning of the term "explicit address." Applicants believe a person of ordinary skill in the art would understand the term "explicit address" within the context of the example provided in the specification of "direct 48-bit Neuron ID addressing." Specification Pg. 35, Lns. 4-5. Applicants submit that the meaning of the term "explicit address" is a network address that does not need to be translated, for example by a look-up table, in order to be routed. Applicants respectfully request that the objection under 112, second paragraph be withdrawn.

The fact that the claims, more specifically, term "explicit addressing" renders the claim indefinite can be seen from the section above. That is, applicant refers to "direct 48-bit Neuron ID addressing" and also submits the meaning of term as a network address that does not need to be translated, for example by a look-up table, in order to be routed.

As such, it is certainly unclear whether the term intends to cover the neuron id and/or the network address that does not need translation, thus enabling the scope of the unascertainable.

- c. Obviousness Rejection based on Pascucci and Hite (remarks, pg. 13 [A]).
- i. Claim 19 is not obvious under section 103. Neither reference provides any reason for why a person of skill in the art would actually use the pre-defined, i.e. pre-programmed commands of Hite with Pascucci system (remarks, pg. 14, pg. 18 [B]).

Initially, it should be noted that the term "commands" as in the claims actually represents variables as in the specification as admitted by the applicant above (see argument a).

Applicant should also note that during patent examination, the pending claims must be "given >their< broadest reasonable interpretation consistent with the

specification." > In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

See MPEP 2111.01 on the claim interpretation during patent examination, more specifically, the interpretation of the terms based on its plain meaning.

As such, it should have been clear that the term "command" was in fact interpreted as is known in the art, i.e. an instruction to a computer program that, when issued by the user, causes an action to be carried out, See Microsoft Dictionary, pg. 111, submitted on form PTO-892, because specification failed to explicitly define the term command to comprise variables.

Therefore, applicant's argument regarding the obviousness rejection is considered moot in view of new grounds of rejection, simply because applicant has admitted that the term command actually represents the variables, which are disclosed in Pascucci.

ii. Applicant's additionally submit that Hite and Pascucci are not properly combinable (remarks, pg. 15, pg. 19 [B]).

In response to argument (ii), the arguments are considered moot in view of new grounds of rejection in light of the same reasons as set forth in (i).

iii. The combination of Pascucci and Hite teaches away from the claimed invention (remarks, pg. 15, pg. 19).

In response to argument (iii), the arguments are considered moot in view of new grounds of rejection in light of the same reasons as set forth in (i).

d. Additionally, the N1 LAN in Pascussi is identified as the communication network, however, the N1 LAN is not located between said plurality of application controllers and said control interface as claimed in amended claim 19 (remarks, pg. 17).

In response to argument [d], Examiner respectfully disagrees.

Applicant submits that "Pascucci, the N1 LAN is located between network control units and the operator work station 14-7, not between the application controllers 14-5, 14-17, 14-19 and control interface 14-1".

The fact that LAN is located between network control units and the control interface, which in fact are connected to application controllers, is sufficient to be interpreted on the amended claim 19, because the limitation does not suggest that the application controllers and the control interface are directly connected via the LAN or communication network and/or without any network control units.

e. Finally...in particular neither references discloses preprogrammed application controller specific commands (remarks, pg. 17).

In response to argument [e], Examiner respectfully disagrees.

As set forth above by the applicant's submission (see argument a), the commands in the claims actually represents the variables as in the specification.

As such, the commands as in the claims are interpreted as the variables hereinafter.

In support for the unclaimed variables, applicant specification discloses:

A. Operation Overview (specification, pg. 35-40).

The local control interface 12 and application controllers are capable of communicating over a variety of hardwire and/or wireless communication backbones. In the preferred embodiment, the present invention uses Echelon Corporation's LonWorks technology as its communications medium. The network architecture is primarily master/slave with peer-to-peer (i.e., application controller to application controller) communications only as required by some applications. The local control interface 12 initiates most exchanges of communication with the application controllers. All communication exchanges are initiated using LonWorks explicit messages with explicit addressing (i.e. direct 48-bit Neuron ID addressing). The local control interface 12 uses Standard Network Variable Types (SNVTs) for the standard data object model values sent via explicit addressing to each application controller. The application controllers 14, 15, 16 and 18 and the controller interface 12 also provide LonWorks SNVTs for access to system features via third-party LonWorks devices. In operation, the local controller interface 12 does not directly manipulate the third-party device's SNVTs using LonWorks Network Management commands, however, third party networking tools can. Although the present invention preferably operates using LonWorks, the control system is well-suited for use with essentially any private protocols or "plug and play" open communications protocols.

The local control interface 12 also provides a control configuration wizards that walk the user through the steps required to monitor and/or set the control variables for a particular application controller. The wizards include easy-to-use graphical setup screens for common configuration items, such as occupied/unoccupied temperature setpoints and backup scheduling and alarm limits.

As noted above, the application controllers 14, 15, 16 and 18 operate in accordance with various control variables that are specified by the user (or through pre-set default values). For example, an HVAC application will include a temperature variable that sets the desired inside temperature for the corresponding area. As in many conventional control systems, the application controllers are capable of operating in two distinct modes, one when the area is occupied and one when it is not. For example, an HVAC application may include a first temperature setting to be satisfied when the area is occupied and a second temperature when the area is not occupied.

Although the application controllers are typically capable of operating in a stand-alone mode, they are capable of communicating with the local control interface 12. Through these communications, the local control interface 12 has the ability to set control variables values within the application controllers using explicit messages and SNVTs for data structures. This permits the local control interface 12 to affect operation of the various system applications. The application controllers are preprogrammed with the data structure or format of all explicit messages associated with the controller type. This permits the application controllers to parse and understand the explicit messages. Alternatively, the applications may be downloaded with this information as necessary, for example, to add new explicit messages or to modify existing explicit messages.

B. Preprogramming of Local Control Interface

As described in some detail above, the local control interface 12 allows users to specify occupancy groups, schedules, holidays and setpoints for the various application controllers. This information may be entered into the local control interface 12 using its touch screen. If desired, this information can be entered into a PC-based program and downloaded into the local control interface 12 via the serial port in the AM186EM main processor.

The control system 10 of the present invention permits self-configuration and integrated operation of application controllers of various types. This is preferably achieved by preprogramming the control system 10 with a configuration table that stores profiles for the various controller types recognized by the system 10. Although the precise information included in these profiles will vary for each application controller, these profiles generally include information about the input SNVTs, output SNVTs and configuration SNVTs of all supported controller types (emphasis added). The table and its associated routines provide for lookup of SNVTs by name...

In a preferred embodiment, each profile includes a record for each variable supported by the application controller. The record includes a field for variable type, variable name, display name and variable number. The variables are preferably classified in one of three different types--namely, input variables, output variables and input configuration variables. Input variables represent variables that can be sent to the application controller by the local control interface. Output variables represent variables that can sent by the application controller to the local control interface. And finally, input configuration variables are control variables that relate to operation of the application controller, but that are not routinely varied through local control interface 12 commands or otherwise. Each application controller is preferably pre-loaded with default values for all control variables. This facilitates automated configuration, by eliminating the need to provide these control variables with initial values. By way of example, the following is an implementation of the profile for an AHU-1 application controller presented a "C" header file:

In view of disclosure above, the variable, for example, can include, temperature variable that sets the desired inside temperature for the corresponding area.



Furthermore, the user can set and/or preset the values for this variable, for example, alarm limits, through a wizard program.

Pascussi discloses an HVAC monitoring system for building environment (fig. 13-16, col. 32 L5-47).

Logically, it would be clear to one skilled in the art that Pascussi does disclose the preprogrammed variables such as temperature variable because without this variables, the HVAC system would not operate.

For example:

At column 31 lines 50-67, Pascussi discloses smart detectors that detect smoke, thermal conditions and alarms (Emphasis added).

The detection of alarm, in itself, is evident that Pascussi does teach and disclose the pre-programmed variables.

Stated another way, the detection of an alarm must include pre-setting the alarm limits on certain variable, such as temperature variable. For example: if the Temperature (T) is greater than threshold/limit, then activate alarm to notify the operator.

Furthermore, Pascussi at column 33 lines 55 to col. 34 lines 45, discloses objects, which are categorized in types and wherein each object type may have several instance, each instance of an object having its own set of data, such as object name, current value, alarm limit, etc. One example of a software object manager is an analog input object manager. This would be the database manager for all instances of analog input objects, such as instances T1, T2, T3 of temperature objects T. (Emphasis added).

The temperature object, and its associated data set such as object name, current value, alarm limits, etc., is equivalent to preprogrammed variable.

The usage of data structure of T2 at column 34, lines 27-42, in itself, is another evidence of preprogrammed variables because T2 is a variable that measure temperature and the data structure must be created at the time of implementing the system, and not on the fly.

Moreover, Pascussi explicitly discloses the preprogramming of the new objects instances when new object is installed in the system by modifying the database to create new instance of the new object, e.g. object T4.

Therefore, all these teachings are evidenced to show the usage of preprogrammed variables and/or objects in Pascucci.

f. Finally, none of the references, either alone or in combination disclose each of said plurality of profiles associated with said controller type of one of said plurality of application controllers (remarks, pg. 19-20.

In response to argument [f], Examiner respectfully disagrees.

At column 33 lines 55 to column 34 lines 26, Pascucci explicitly discloses storing objects which are categorized in types, each object associated with several instances, each of which has its own data values called attributes, for example, the analog input object stored in database 19-29 are each an instance of a type of object. Each of these instances has its own set of attributes. These attributes are data which includes object name, the current value, the alarm limits, etc.

In other words, object types, for example, temperature object which corresponds to temperature application controller, is stored in the database with its associated set of values such

as name, current value, alarm limits, etc. The storage of this information in the database for specific object types is equivalent to a profile(s) associated with plurality of application controllers.

Note that the profile as per applicant specification stores information such as name, values, inputs, configuration, output, etc. (specification, pg. 35-40).

Furthermore, other citation(s) as in the rejection clearly shows the usage of profiles corresponding to application controller type.

#### **Claim Objections**

Claims 29-31 are objected to because of the following informalities: improper dependency.

- . Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 1-2, 4, 7-8, 11-13, 15-27, 29-31 and 67 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

**Claim 1 recites:**

A control system for controlling automated applications in a building environment comprising:

a communications network;

a plurality of application controllers connected to said communications network, each of said application controllers including means for controlling operation of a corresponding automated device, each of said plurality of application controllers having a controller type;

a control interface connected to said communications network, wherein said communications network is located between said plurality of application controller and said control interface, said control interface including a database having a plurality of at least one profiles, each of said plurality of profiles associated with said controller type of one of said plurality of application controllers, **wherein each of said plurality of profiles contains a plurality of preprogrammed application controller type specific commands**; and

self-configuration means for providing automated configuration of each of said plurality of application controllers on said communications network, said self-configuration means including means for conveying said controller type from each of said plurality of application controllers a first application controller, the first application controller being one of the plurality of application controllers, to said control interface over said communications network, said self-configuration means further including means for identifying one of said plurality of profiles for each of said conveyed controller types in said database, **said self-configuration means further including means for configuring each of said plurality of application controllers using at least one of said plurality of preprogrammed application controller type specific commands of said identified profiles**.

**Claim 2 recites:**

“The control system of claim 1, wherein each of said **preprogrammed application controller type specific commands comprises a variable** and each of said application controllers controls operation of said corresponding automated device in accordance with at least one variable...”

The specification as filed fails to describe “profile containing a plurality of preprogrammed application controller type specific commands”, “self configuring means for configuring each of said plurality of application controller using at least one of said plurality of preprogrammed application controller type specific commands of identified profiles” and

"wherein each of said preprogrammed application controller type specific commands comprises a variable..."

Stated another way, there is no support in the specification as filed for the highlighted subject matter and/or functionalities as set forth above.

In support, applicant specification discloses:

A. Operation Overview (specification, pg. 35-40).

The local control interface 12 and application controllers are capable of communicating over a variety of hardwire and/or wireless communication backbones. In the preferred embodiment, the present invention uses Echelon Corporation's LonWorks technology as its communications medium. The network architecture is primarily master/slave with peer-to-peer (i.e., application controller to application controller) communications only as required by some applications. The local control interface 12 initiates most exchanges of communication with the application controllers. All communication exchanges are initiated using LonWorks explicit messages with explicit addressing (i.e. direct 48-bit Neuron ID addressing). The local control interface 12 uses Standard Network Variable Types (SNVTs) for the standard data object model values sent via explicit addressing to each application controller. The application controllers 14, 15, 16 and 18 and the controller interface 12 also provide LonWorks SNVTs for access to system features via third-party LonWorks devices. In operation, the local controller interface 12 does not directly manipulate the third-party device's SNVTs using LonWorks Network Management commands, however, third party networking tools can. Although the present invention preferably operates using LonWorks, the control system is well-suited for use with essentially any private protocols or "plug and play" open communications protocols.

The local control interface 12 also provides a control configuration wizards that walk the user through the steps required to monitor and/or set the control variables for a particular application controller. The wizards include easy-to-use graphical setup screens for common configuration items, such as occupied/unoccupied temperature setpoints and backup scheduling and alarm limits.

As noted above, the application controllers 14, 15, 16 and 18 operate in accordance with various control variables that are specified by the user (or through pre-set default values). For example, an HVAC application will include a temperature variable that sets the desired inside temperature for the corresponding area. As in many conventional control systems, the application controllers are capable of operating in two distinct modes, one when the area is occupied and one when it is not. For example, an HVAC application may include a first temperature setting to be satisfied when the area is occupied and a second temperature when the area is not occupied.

Although the application controllers are typically capable of operating in a stand-alone mode, they are capable of communicating with the local control interface 12. Through these communications, the local control interface 12 has the ability to set control variables values within the application controllers using explicit messages and SNVTs for data structures. This permits the local control interface 12 to affect operation of the various system applications. The application controllers are preprogrammed with the data structure or format of all explicit messages associated with the controller type. This permits the application controllers to parse and understand the explicit messages. Alternatively, the applications may be downloaded with this information as necessary, for example, to add new explicit messages or to modify existing explicit messages.

B. Preprogramming of Local Control Interface.

As described in some detail above, the local control interface 12 allows users to specify occupancy groups, schedules, holidays and setpoints for the various application controllers. This information may be entered into the local control interface 12 using its touch screen. If desired, this information can be entered into a PC-based program and downloaded into the local control interface 12 via the serial port in the AM186EM main processor.

The control system 10 of the present invention permits self-configuration and integrated operation of application controllers of various types. This is preferably achieved by preprogramming the control system 10 with a configuration table that stores profiles for the various controller types recognized

by the system 10. Although the precise information included in these profiles will vary for each application controller, these profiles generally include information about the input SNVTs, output SNVTs and configuration SNVTs of all supported controller types (emphasis added). The table and its associated routines provide for lookup of SNVTs by name...

In a preferred embodiment, each profile includes a record for each variable supported by the application controller. The record includes a field for variable type, variable name, display name and variable number. The variables are preferably classified in one of three different types--namely, input variables, output variables and input configuration variables. Input variables represent variables that can be sent to the application controller by the local control interface. Output variables represent variables that can be sent by the application controller to the local control interface. And finally, input configuration variables are control variables that relate to operation of the application controller, but that are not routinely varied through local control interface 12 commands or otherwise. Each application controller is preferably pre-loaded with default values for all control variables. This facilitates automated configuration, by eliminating the need to provide these control variables with initial values. By way of example, the following is an implementation of the profile for an AHU-1 application controller presented a "C" header file:

The disclosure above clearly fails to teach, disclose and/or suggest the usage of profile, wherein the profile contains plurality of preprogrammed application controller, type specific commands (emphasis added) and the fact that the configuration of plurality of application controllers is based on these preprogrammed application specific commands.

At best, the profile includes preprogrammed variables, as admitted by the applicant, see response filed, 11/9/07, pgs. 11-12, and which clearly are not equivalent to commands.

Hence, the above claimed limitations presents the subject matter situations, which was not described in the specification as filed in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 4, 7-8, 11-13, 15-27, 29-31 and 67 are rejected for the same reasons as set forth in claim 1 and 2.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-27, 29-31 and 67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 19-27 recites the term "explicit address(ing)" in the claims. The specification fails to distinctly define the meaning of the term "explicit address", rendering the scope of the claim unascertainable.

Claims 29-31 and 67 are rejected due to their dependency on claim 19.

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 19-27 and 67 are rejected under 35 U.S.C. 102(b) as anticipated by Pascucci et al. (hereinafter Pascucci, U. S. Patent No. 5,550,980).

As per claim 19, Pascucci discloses a control system for automated applications in a building environment (fig. 14, col. 32 L5-47) comprising:

a communications network (fig. 15 item #15-7);

a plurality of applications controllers connected to said communications network, each of said application controllers providing automated operation of a corresponding application, each of said application controllers being capable of providing automated operation of said corresponding controllers in accordance with a plurality of control variables (fig. 14 item #14-15, 14-17, 14-19, col. 51 L50-67, col. 35 L30-66);

a control interface connected to said network (fig. 14 item #14-1), wherein said communications network is located between said plurality of application controllers (col. 27 L3-10, fig. 10) and said control interface including means for transmitting explicit messages by way of an explicit address to each of said application controllers, said explicit messages including preprogrammed application specific commands, i.e. variables for adjusting said control variables of said application controller (col. 70 L54 to col. 71 L56, col. 51 L50-67; col. 35 L1-19: such as adjusting temperature object or variable);



wherein each of said application controllers include means for processing said preprogrammed application controller specific commands received from said control interface in said explicit messages and means for adjusting a value of said control variables in accordance with said preprogrammed application controller specific commands, whereby said control interface is capable of controlling operation of said application controllers (col. 31 L21-39, col. 41 L42-55, col. 77 L66 to col. 78 L15 and col. 85 L40 to col. 86 L14).

As per claim 20, Pascucci discloses a system wherein the application controllers include application controllers of a plurality of different controller types and control interface including a preprogrammed database containing least one profile, said profile defining plurality of control variables for said one of said controller types (col. 67 L9-10, fig. 64 item #64-14, 64-30 and col. 33 L49-67: also note the configuration of master/slave controllers).

As per claim 21, Pascucci discloses a system wherein the preprogrammed database containing a plurality of profiles, each of said profiles being uniquely associated with one of said controller types and defining of control variables for said one of said controllers types (col. 67 L9-10, fig. 64 item #64-14, 64-30 and col. 33 L49-67).

As per claim 22, Pascucci discloses a system wherein said plurality of application controllers includes at least one HVAC application controller, at least one lightning application controller and at least one access control application (col. 85 L65-67, fig. 15 item #15-1 and fig. 10 item #10-1, col. 32 L5-47).

As per claim 23, Pascucci discloses a system comprising a network server interface, said network server interface including a means for monitoring and controlling operation of said control system over an Internet connection (col. 26 L44-52 and fig. 16 and col. 32 L5-67).

As per claim 24, Pascucci discloses a system wherein control interface includes a means for periodically transmitting a ping to each of said application controllers (fig. 14 item #14-1, fig. 15 item #15-1, 15-27) and a means for receiving a response to said ping from each of said application controllers (Pascucci: fig. 15 item #15-9, fig. 9A item #9-27, 9-7 and fig. 10 item #10-7).

As per claim 25, Pascucci discloses a system wherein each of said application controllers includes a means for receiving said ping from control interface (col. 31 L21-30) and a means for transmitting a response to said ping to said control interface (col. 31 L21-39 and col. 56 L1-51).

As per claim 26, Pascucci discloses a system wherein said ping for at least one of said application controllers includes data for updating said application controller with current system information, said application controller including a means for updating certain of said control variables in accordance with said current system information (col. 41 L42-55).

As per claim 27, Pascucci discloses a system wherein said response transmitted by at least one of said application controllers includes data relevant to at least one other of said application controllers, said control interface including means for transmitting said data included in said response to said other of said application controllers (col. 31 L20-30, col. 57 L25-62, col. 58 L37-57 and col. 44 L6-12, since application specific controllers are attached to network controller unit through N2 bus for communication).

As per claim 67, Pascucci discloses a system wherein each of said preprogrammed application controller type specific commands comprises at least one of said plurality of control variables (col. 34 L26-43, fig. 20 item #20-1, col. 41 L28-64, col. 64 L66 to col. 65 L10 and col. 78 L13-20: such as temperature variable).

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1-2, 4, 11-13, 15-18 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pascucci et al. (hereinafter Pascucci, U. S. Patent No. 5,550,980) in view of Pouchak et al. (hereinafter Pouchak, Pub. No.: 2003/0005086 A1).

As per claim 1, Pascucci discloses a control system for controlling automated applications in a building environment comprising:

a communications network (fig. 15 item #15-7);

a plurality of applications controllers connected to said communications network, each of said application controllers including means for controlling operation of a corresponding automated device, each of said application controllers including a controller type (fig. 10 item #10-1, fig. 15 item #15-15, 15-19, fig. 17 item #17-13 and fig. 64);

a control interface connected to said communications network, wherein said communications network is located between said plurality of application controllers (col. 27 L3-10, fig. 10) and said control interface including a database having plurality of profiles, each of said plurality of profiles associated with said controller type of one of said plurality of application controllers, wherein each of said plurality of profiles contains plurality of preprogrammed application controller type specific commands, i.e. variables (col. 33 L55 to col. 34 L26, col. 41 L29 to col. 42 L67, fig. 15 item #15-1, 15-3, 15-5, fig. 11 item #11-3, fig. 20 item #20-11, 20-2, fig. 64 item #64-14, 64-30);

a means for conveying said controller type of said application controller from each of plurality of application controllers to control interface over said communication network (col. 48 L23-30);

a means for configuring application controller based on a profile corresponding to said controller type of said application controller (col. 36 L40-65, col. 42 L8-35);

a means for identifying one of said plurality of said profiles for each of said conveyed controller types in said database (col. 41 L29 to col. 42 L56, col. 50 L10-31, col. 33 L55 to col. 34 L-67, col. 35 L57 to col. 36 L67).

However, Pascucci does not disclose a self-configuration means for providing automated configuration of each of said application controller on said network and a means for configuring each of said plurality of application controllers using at least one of said plurality of pre-defined application controller specific commands.

Pouchak discloses the process of automatic self-configuration of the controllers on the network (page 1 [0004], page 9 [0105-0108], page 10 [0120-0128]).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Pascucci in view of Pouchak, in order to include a self-configuration means for automatic configuration of the application controller, since Pouchak explicitly teaches and discloses the process of automatic self-configuring of the controllers on the network.

One of ordinary skilled in the art would have been motivated because it would have provided a mechanism for automatic node addressing and self-configuration for multi-node control systems (Pouchak, page 9 [0105], page 10 [0129]).

As per claim 2, Pascucci discloses a system wherein each of said preprogrammed application controller type specific commands comprises a variable and each of application controllers controls operation of said corresponding automated device in accordance with at least one variable (col. 34 L26-43); and wherein control interface includes means for controlling operation of said application controller by specifying a value of said variable (fig. 20 item #20-1, col. 41 L28-64, col. 64 L66 to col. 65 L10 and col. 78 L13-20).

As per claim 4, Pascucci discloses a system wherein said control system includes means for transmitting explicit messages to said application controllers and one of said plurality of preprogrammed application controller type specific commands, i.e. variables (fig. 14 item #14-7, 14-1, 14-13 and fig. 12 item #12-3, 12-5, 12-1, col. 58 L39-42), and means for receiving said explicit messages from said control interface (col. 58 L39-44 and fig. 10 item #10-3, 10-1).

However, Pascucci does not teach that each of said explicit messages includes an identification unique to a specific one of said application controllers and does not disclose a

means for recognizing only those of said explicit messages which include an identification unique to said application controller in which said means for receiving resides.

Pouchak discloses a means for recognizing only those of explicit messages which include an identification unique to said application controller (page 1 [0004] and page 4-5 [0074]).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Pascucci in view of Pouchak, in order to include a means for recognizing only those explicit messages, which include identification unique to application controller, since Pouchak explicitly teaches this process.

One of ordinary skilled in the art would have been motivated because it would have enabled the communication of control information between nodes utilizing subnet and node addressing (Pouchak, see abstract).

As per claim 11, Pascucci discloses a system wherein said plurality of application controllers includes at least one HVAC application controller, at least one lightning application controller and at least one access control application (col. 85 L65-67, fig. 15 item #15-1 and fig. 10 item #10-1).

As per claim 12, Pascucci discloses a system wherein control interface includes a database of application control software images (fig. 64 item #64-14); and means for downloading said control software images into at least one of said application controllers (fig. 64 item #64-40, fig. 33 item #33-5 and col. 30 L15-48).

As per claim 13, Pascucci discloses a system comprising a means for downloading said application controller software images into said local control interface from an external source, whereby said application controller software images can be upgraded (col. 30 L15-48).

As per claim 15, Pascucci discloses a system wherein control interface includes a means for downloading a local control interface control software image into said local control interface (col. 30 L15-48).

As per claim 16, Pascucci discloses a system comprising means for downloading said local control interface control software image into said local control interface from an external source, whereby said local control interface control software images can be upgraded (col. 30 L15-48).

As per claim 18, Pascucci discloses a system wherein at least one of said local control interface and said application controllers is preprogrammed with a generic programming language and includes a means for downloading a control program to be run by said programming language to define operation of at least one of said local control interface and said application controllers (col. 33 L1-36, fig. 14 item #14-1, 14-15, 14-17, fig. 15 item #15-1, 15-3, 15-15, 15-11).

As per claims 17 and 29, they do not teach or further define over the limitations in claims 1-2, 4, 11-13, 15-16 and 18. Therefore claims 17 and 29 are rejected for the same reasons as set forth in claims 1-2, 4, 11-13, 15-16 and 18.

5. Claims 7-8 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pascucci et al. (hereinafter Pascucci, U. S. Patent No. 5,550,980) in view of Pouchak et al. (hereinafter Pouchak, Pub. No.: 2003/0005086 A1), and further in view of Simmons et al. (hereinafter Simmons, U. S. Patent No. 6,349,883 B1).

As per claim 7, Pascucci and Pouchak discloses a system wherein control interface includes a means for grouping a plurality of application controllers into an occupancy group (into a group, Pascucci, col. 40 L30-65).

However, Pascucci and Pouchak does not disclose a means for defining said occupancy status of each of said application controllers in a given group as a group (i.e. interpreted as indicating occupancy status of each group or zone).

Simmons discloses an occupancy indication means for indicating individual occupancy status within respective ones of utility zones (col. 9 L27-51 and fig. 1, col. 5 L50-67 and col. 6 L51-55).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Pascucci and Pouchak in view of Simmons in order to include an occupancy indication means, since Simmons explicitly teaches and discloses the process of indicating individual occupancy status within respective zones.

One of ordinary skilled in the art at the time the invention was made would have been motivated because significant energy savings would have been effected by introducing the occupancy factor into the control system (Simmons, col. 4 L16-25, col. 3 L13-23).

As per claim 8, Pascucci discloses a system comprising a network server interface, said network server interface including means for monitoring and controlling operation of said



control system over an Internet connection (fig. 16 and col. 32 L5-67, col. 26 L44-52, fig. 33 and fig. 37).

As per claim 31, Pascucci in view of Pouchak do not disclose a system wherein control interface includes a means for calculating a person count for at least one of said groups based on access entry and access exit information received by said control interface from an access control unit (i.e. a motion detector that detects the motion) and means for defining occupancy status of said controllers within said group based on said person count.

Simmons discloses a system that includes motion detectors (a means for calculating person count) so that the occupancy status of the zones could be provided (col. 3 L13-24, col. 5 L50-60, col. 7 L1-26, col. 9 L28-60).

Therefore it would have been obvious to a person of ordinary skilled in the art at the time the invention was made to modify Pascucci in view of Pouchak, and further in view of Simmons, in order to include a means for calculating a person count for at least one group and defining the occupancy status of the group or controller.

One of ordinary skilled in the art would have been motivated because of the same reasons as set forth in claim 7.

As per claim 30, it does not teach or further define over the limitations in claims 7-8 and 31. Therefore claim 30 is rejected for the same reasons as set forth in claims 7-8 and 31.

**Additional References**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Chari, US 6,151,023: Display of System information: HVAC system.
- b. Einkauf et al., U. S. Patent No. 5,579,482: Storing interface information.

**Conclusion**

Examiner's Remarks: The teachings of the prior art should not be restricted and/or limited to the citations by columns and line numbers, as specified in the rejection. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

In the case of amendments, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and support, for ascertaining the metes and bounds of the claimed invention.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after


the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAMAL B. DIVECHA whose telephone number is 571-272-5863. The examiner can normally be reached on Increased Flex Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamal Divecha/  
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